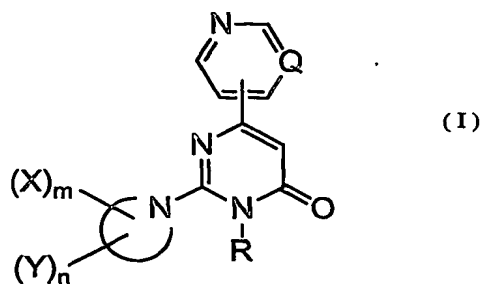


CLAIMS

1. A pyrimidone derivative represented by formula (I) or a salt thereof, or a solvate thereof or a hydrate thereof:



wherein Q represents CH or nitrogen atom;

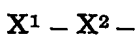
R represents a C₁-C₁₂ alkyl group which may be substituted;

the ring of:



represents piperazine ring or piperidine ring;

each X independently represents



wherein X¹ represents an oxo group; a C₁-C₈ alkyl group which may be substituted;

a C₃-C₈ cycloalkyl group which may be substituted; an optionally partially

hydrogenated C₆-C₁₀ aryl ring which may be substituted; an indan ring which may

be substituted; an optionally substituted heterocyclic ring having 1 to 4 hetero

atoms selected from the group consisting of oxygen atom, sulfur atom, and nitrogen

atom, and having 5 to 10 ring-constituting atoms in total; an aralkyloxy group; a

group represented by -N(Ra)(Rb) wherein Ra and Rb are the same or different and

each is hydrogen, a C₁-C₄ alkyl group which may be substituted, an aralkyl group

which may be substituted, a C₃-C₈ cycloalkyl group which may be substituted, an

aryl group which may be substituted, C₁-C₈ alkylcarbonyl group which may be substituted,

C₃-C₈ cycloalkylcarbonyl group which may be substituted,

aralkylcarbonyl group which may be substituted,

C₆-C₁₀ arylcarbonyl group which may be substituted,

C₁-C₈ alkylsulfonyl group which may be substituted,

C₃-C₈ cycloalkylsulfonyl group which may be substituted,

aralkylsulfonyl group which may be substituted,

C₆-C₁₀ arylsulfonyl group which may be substituted,

C₁-C₈ alkyloxycarbonyl group which may be substituted,

C₃-C₈ cycloalkyloxycarbonyl group which may be substituted,

aralkyloxycarbonyl group which may be substituted,

C₆-C₁₀ aryloxycarbonyl group which may be substituted,

aminocarbonyl,

N-C₁-C₈ alkylaminocarbonyl group which may be substituted,

N, N'-C₁-C₈ dialkylaminocarbonyl group which may be substituted,

N-C₁-C₈ alkyl-N'-C₃-C₈ cycloalkylaminocarbonyl group which may be substituted,

N-C₁-C₈ alkyl-N'-aralkylaminocarbonyl group which may be substituted,

N-C₁-C₈ alkyl-N'-C₆-C₁₀ arylaminocarbonyl group which may be substituted,

C₃-C₈ cycloalkylaminocarbonyl group which may be substituted,

N,N'-C₃-C₈ dicycloalkylaminocarbonyl group which may be substituted,

N-C₃-C₈ cycloalkyl-N'-aralkylaminocarbonyl group which may be substituted,

N-C₃-C₈ cycloalkyl-N'-C₆-C₁₀ arylaminocarbonyl group which may be substituted,

aralkylaminocarbonyl group which may be substituted,

N,N'-diaralkylaminocarbonyl group which may be substituted,

N-aralkyl- N'-C₆-C₁₀ arylaminocarbonyl group which may be substituted,

C₆-C₁₀ arylaminocarbonyl group which may be substituted,

N,N'-C₆-C₁₀ diarylamino carbonyl group which may be substituted,

or an optionally substituted heterocyclic ring having 1 to 4 hetero atoms selected from the group consisting of oxygen atom, sulfur atom, and nitrogen atom, and having 5 to 10 ring-constituting atoms in total; or Ra and Rb together with the adjacent nitrogen atom form a 4 to 7 membered heterocyclic ring which may further contain 1 to 4 groups selected from an oxygen atom, a sulfur atom, N-Rc (wherein Rc represents a hydrogen atom, a C₁-C₄ alkyl group which may be substituted, an aralkyl group which may be substituted, C₃-C₈ cycloalkyl group which may be substituted or an aryl group which may be substituted, C₁-C₈ alkylcarbonyl group which may be substituted, C₃-C₈ cycloalkylcarbonyl group which may be substituted, aralkylcarbonyl group which may be substituted, C₆-C₁₀ arylcarbonyl group which may be substituted, C₁-C₈ alkylsulfonyl group which may be substituted, C₃-C₈ cycloalkylsulfonyl group which may be substituted, aralkylsulfonyl group which may be substituted, C₆-C₁₀ arylsulfonyl group which may be substituted, C₁-C₈ alkyloxycarbonyl group which may be substituted, C₃-C₈ cycloalkyloxycarbonyl group which may be substituted, aralkyloxycarbonyl group which may be substituted, C₆-C₁₀ aryloxycarbonyl group which may be substituted, aminocarbonyl, N-C₁-C₈ alkylaminocarbonyl group which may be substituted, N, N'-C₁-C₈ dialkylaminocarbonyl group which may be substituted, N-C₁-C₈ alkyl-N'-C₃-C₈ cycloalkylaminocarbonyl group which may be substituted, N-C₁-C₈ alkyl-N'-aralkylaminocarbonyl group which may be substituted, N-C₁-C₈ alkyl-N'-C₆-C₁₀ arylaminocarbonyl group which may be substituted, C₃-C₈ cycloalkylaminocarbonyl group which may be substituted, N, N'-C₃-C₈ dicycloalkylaminocarbonyl group which may be substituted,

N-C₃-C₈ cycloalkyl-N'-aralkylaminocarbonyl group which may be substituted,
N-C₃-C₈ cycloalkyl-N'-C₆-C₁₀ arylaminocarbonyl group which may be substituted,
aralkylaminocarbonyl group which may be substituted,
N,N'-diaralkylaminocarbonyl group which may be substituted,
N-aralkyl- N'-C₆-C₁₀ arylaminocarbonyl group which may be substituted,
C₆-C₁₀ arylaminocarbonyl group which may be substituted,
N,N'-C₆-C₁₀ diarylaminocarbonyl group which may be substituted,
or an optionally substituted heterocyclic ring having 1 to 4 hetero atoms selected
from the group consisting of oxygen atom, sulfur atom, and nitrogen atom, and
having 5 to 10 ring-constituting atoms in total),
a carbonyl group, a sulfinyl group or a sulfonyl group in the ring, and said 4 to 7
membered heterocyclic ring may optionally be fused with an aryl group which may
be substituted;

X² represents a bond, a carbonyl group, a sulfinyl group, a sulfonyl group, an
oxygen atom, a sulfur atom, a C₁-C₄ alkylene group which may be substituted or
N-Rd (Rd represents a hydrogen atom, a C₁-C₄ alkyl group which may be
substituted, an aralkyl group which may be substituted, C₃-C₈ cycloalkyl group
which may be substituted or an aryl group which may be substituted,
C₁-C₈ alkylcarbonyl group which may be substituted,
C₃-C₈ cycloalkylcarbonyl group which may be substituted,
aralkylcarbonyl group which may be substituted,
C₆-C₁₀ arylcarbonyl group which may be substituted,
C₁-C₈ alkylsulfonyl group which may be substituted,
C₃-C₈ cycloalkylsulfonyl group which may be substituted,
aralkylsulfonyl group which may be substituted,
C₆-C₁₀ arylsulfonyl group which may be substituted,

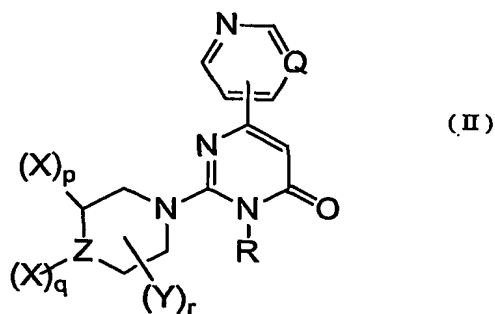
C₁-C₈ alkyloxycarbonyl group which may be substituted,
C₃-C₈ cycloalkyloxycarbonyl group which may be substituted,
aralkyloxycarbonyl group which may be substituted,
C₆-C₁₀ aryloxycarbonyl group which may be substituted,
aminocarbonyl,
N-C₁-C₈ alkylaminocarbonyl group which may be substituted,
N, N'-C₁-C₈ dialkylaminocarbonyl group which may be substituted,
N-C₁-C₈ alkyl-N'-C₃-C₈ cycloalkylaminocarbonyl group which may be substituted,
N-C₁-C₈ alkyl-N'-aralkylaminocarbonyl group which may be substituted,
N-C₁-C₈ alkyl-N'-C₆-C₁₀ arylaminocarbonyl group which may be substituted,
C₃-C₈ cycloalkylaminocarbonyl group which may be substituted,
N,N'-C₃-C₈ dicycloalkylaminocarbonyl group which may be substituted,
N-C₃-C₈ cycloalkyl-N'-aralkylaminocarbonyl group which may be substituted,
N-C₃-C₈ cycloalkyl-N'-C₆-C₁₀ arylaminocarbonyl group which may be substituted,
aralkylaminocarbonyl group which may be substituted,
N,N'-diaralkylaminocarbonyl group which may be substituted,
N-aralkyl- N'-C₆-C₁₀ arylaminocarbonyl group which may be substituted,
C₆-C₁₀ arylaminocarbonyl group which may be substituted,
N,N'-C₆-C₁₀ diarylaminocarbonyl group which may be substituted,
or an optionally substituted heterocyclic ring having 1 to 4 hetero atoms selected from the group consisting of oxygen atom, sulfur atom, and nitrogen atom, and having 5 to 10 ring-constituting atoms in total);
m represents an integer of 1 to 3;
each Y independently represents a halogen atom, a hydroxy group, a cyano group, Y¹-Y³- wherein Y¹ represents a C₁-C₈ alkyl group which may be substituted; a C₃-C₈ cycloalkyl group which may be substituted or a C₆-C₁₀ aryl ring which may be substituted; Y³ represents a carbonyl group, a sulfinyl group, a sulfonyl group, an oxygen atom, a sulfur atom, a C₁-C₄ alkylene group which may be substituted or

N-Re (Re represents a hydrogen atom, a C₁-C₄ alkyl group which may be substituted, an aralkyl group which may be substituted, C₃-C₈ cycloalkyl group which may be substituted or an aryl group which may be substituted, C₁-C₈ alkylcarbonyl group which may be substituted, C₃-C₈ cycloalkylcarbonyl group which may be substituted, aralkylcarbonyl group which may be substituted, C₆-C₁₀ arylcarbonyl group which may be substituted, C₁-C₈ alkylsulfonyl group which may be substituted, C₃-C₈ cycloalkylsulfonyl group which may be substituted, aralkylsulfonyl group which may be substituted, C₆-C₁₀ arylsulfonyl group which may be substituted, C₁-C₈ alkyloxycarbonyl group which may be substituted, C₃-C₈ cycloalkyloxycarbonyl group which may be substituted, aralkyloxycarbonyl group which may be substituted, C₆-C₁₀ aryloxycarbonyl group which may be substituted, aminocarbonyl, N-C₁-C₈ alkylaminocarbonyl group which may be substituted, N, N'-C₁-C₈ dialkylaminocarbonyl group which may be substituted, N-C₁-C₈ alkyl-N'-C₃-C₈ cycloalkylaminocarbonyl group which may be substituted, N-C₁-C₈ alkyl-N'-aralkylaminocarbonyl group which may be substituted, N-C₁-C₈ alkyl-N'-C₆-C₁₀ arylaminocarbonyl group which may be substituted, C₃-C₈ cycloalkylaminocarbonyl group which may be substituted, N,N'-C₃-C₈ dicycloalkylaminocarbonyl group which may be substituted, N-C₃-C₈ cycloalkyl-N'-aralkylaminocarbonyl group which may be substituted, N-C₃-C₈ cycloalkyl-N'-C₆-C₁₀ arylaminocarbonyl group which may be substituted, aralkylaminocarbonyl group which may be substituted, N,N'-diaralkylaminocarbonyl group which may be substituted, N-aralkyl- N'-C₆-C₁₀ arylaminocarbonyl group which may be substituted,

C₆-C₁₀ arylaminocarbonyl group which may be substituted,
 N,N'-C₆-C₁₀ diarylamino carbonyl group which may be substituted,
 or an optionally substituted heterocyclic ring having 1 to 4 hetero atoms selected from the group consisting of oxygen atom, sulfur atom, and nitrogen atom, and having 5 to 10 ring-constituting atoms in total),
 n represents an integer of 0 to 8;
 when X and Y or two Y groups are attached on the same carbon atom, they may combine to each other to form a C₂-C₆ alkylene group;
 and when m is 1, n is 0, and X is X¹-CO-,

- (1) X does not bind to 3-position of unsubstituted 1-piperazinyl group or does not bind to 3-position of a 4-alkyl-1-piperazinyl group; or
- (2) X does not bind to 3-position or 4-position of non-substituted 1-piperidinyl group.

2. The pyrimidone derivative or the salt thereof, or the solvate thereof or the hydrate thereof according to claim 1 having the following formula(II)



wherein Q, R, X and Y are the same as those defined in claim 1;
 p is 0 or 1; q is 0 or 1; r is an integer of 0 to 6; p+q is 1 or 2;
 and Z represents N or CZ¹ wherein Z¹ represents hydrogen atom or Y.

3. The pyrimidone derivative or the salt thereof, or the solvate thereof or the hydrate thereof according to claim 2, wherein R is a C₁-C₃ alkyl group which

may be substituted by a C₃-C₈ cycloalkyl group.

4. The pyrimidone derivative or the salt thereof, or the solvate thereof or the hydrate thereof according to claim 3, wherein R is methyl group or ethyl group; Y is in 3-, 4- or 5-position of the piperazine ring or the piperidine ring; p+q is 1; and r is an integer of 0 to 3.

5. The pyrimidone derivative or the salt thereof, or the solvate thereof or the hydrate thereof according to claim 4, wherein X is a C₁-C₈ alkyl group which may be substituted or a C₆-C₁₀ aryl ring which may be substituted; Y is a C₁-C₆ alkyl group which may be substituted; p is 1; q is 0; r is an integer of 0 to 3; and Z is N or CH.

6. The pyrimidone derivative or the salt thereof, or the solvate thereof or the hydrate thereof according to claim 5, wherein X is a benzene ring which may be substituted, a benzyl group which may be substituted; Y is a methyl group which may be substituted; Z is N and r is 0 or 1.

7. The pyrimidone derivative or the salt thereof, or the solvate thereof or the hydrate thereof according to claim 4, wherein X is a benzene ring which may be substituted, a benzyl group which may be substituted, a benzoyl group which may be substituted, or a benzisothiazol ring which may be substituted; Y is a methyl group which may be substituted; Z is N and p is 0.

8. The pyrimidone derivative or the salt thereof, or the solvate thereof or the hydrate thereof according to claim 4, wherein X is a C₁-C₈ alkyl group substituted by a benzene ring which may be substituted or a benzene ring which may be substituted; Y is a hydroxy group, a cyano group, or Y¹-CO- wherein Y¹ is a C₁-C₈ alkyl group; Z is CH or C-Y and r is 0 or 1.

9. The pyrimidone derivative or the salt thereof, or the solvate thereof or the hydrate thereof according to claim 8, wherein X is a benzyl group which may be substituted or a benzene ring which may be substituted; Y is a hydroxy group, a cyano group, or an acetyl group; Z is CH or C-Y and r is 0 or 1.

10. A pyrimidone derivative which is selected from the group consisting of:

2-(3-Phenylpiperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(4-Fluorophenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(3-Fluorophenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(2-Fluorophenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(4-Chlorophenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

(*S*)-2-(3-(4-Chlorophenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

(*R*)-2-(3-(4-Chlorophenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(3-Chlorophenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(2-Chlorophenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(4-Bromophenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(3-Bromophenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(2-Bromophenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(4-Methylphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(3-Methylphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(2-Methylphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(4-Cyanophenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(3-Cyanophenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(2-Cyanophenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(4-Methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(3-Methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(2-Methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(2-Ethoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(5-Fluoro-2-methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(4-Fluoro-3-methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-

pyrimidin-4-one;

2-(3-(4-Fluoro-2-methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

(S)-2-(3-(4-Fluoro-2-methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

(R)-2-(3-(4-Fluoro-2-methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

2-(3-(4-Chloro-2-methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

2-(3-(4-Fluoro-2-methylphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

2-(3-(2-Fluoro-6-methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

2-(3-(5-Bromo-2-methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

2-(3-(2-Bromo-4-fluorophenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

2-(3-(2-Chloro-6-fluorophenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

2-(3-(2,4-Difluorophenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

2-(3-(2,6-Difluorophenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

2-(3-(2,6-Dichlorophenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

2-(3-(2,4-Dimethoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

2-(3-(3,4-Dimethoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-

4-one;
2-(3-(2,5-Dimethoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;
2-(3-(2,6-Dimethoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;
2-(3-(2,4-Difluoro-6-methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;(1034)
2-(3-(5-Cyano-2-methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;
2-(3-(4-Cyano-2-methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;
2-(3-(1-Naphthyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;
2-(3-(2-Naphthyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;
2-(3-(2,3-Dihydrobenzofuran-7-yl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;
2-(3-(Benzofuran-2-yl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;
(*S*)-2-(3-(Benzofuran-2-yl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;
2-(3-(4-(Pyrrolidin-1-yl-methyl)phenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;
2-(3-(4-(Pyrrolidin-1-yl)phenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;
2-(3-(2-methoxy-4-(pyrrolidin-1-yl)phenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;
2-(3-(2-methoxy-5-(pyrrolidin-1-yl)phenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;
2-(3-(4-(Phenyl)phenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;
2-(3-(4-(4-Fluorophenyl)phenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-

pyrimidin-4-one;

2-(3-(4-(4-Methoxyphenyl)phenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

2-(3-(4-(2-Methoxyphenyl)phenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

2-(3-(4-(Morpholin-4-yl)phenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

2-(3-(4-(4-Methylpiperazin-1-yl)phenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

2-(4-Phenylpiperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

2-(4-Benzylpiperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

2-(4-Benzoylpiperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

2-(4-(1,2-Benzisothiazol-3-yl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

2-(4-Methyl-3-phenylpiperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

2-(3-(4-Fluoro-2-methoxyphenyl)-4-methylpiperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

(S)-2-(3-(4-Fluoro-2-methoxyphenyl)-4-methylpiperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

(R)-2-(3-(4-Fluoro-2-methoxyphenyl)-4-methylpiperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

2-(4-Acetyl-3-(4-fluoro-2-methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

2-(4-Benzyl-3-(4-fluoro-2-methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

2-(4-Benzyl-3-(ethoxycarbonyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-one;

2-(4-methyl-3-(1-naphthyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3H-pyrimidin-4-

one;

2-(5,5-Dimethyl-3-(2-methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-Phenylpiperidin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(4-Fluorophenyl)piperidin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(3-Fluorophenyl)piperidin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(2-Fluorophenyl)piperidin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(4-Chlorophenyl)piperidin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(4-Bromophenyl)piperidin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(4-Methoxyphenyl)piperidin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(3-Methoxyphenyl)piperidin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(2-Methoxyphenyl)piperidin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(4-((Pyrrolidin-1-yl)methyl)phenyl)piperidin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

(*S*)-2-(3-(4-(Pyrrolidin-1-yl-methyl)phenyl)piperidin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

(*R*)-2-(3-(4-(Pyrrolidin-1-yl-methyl)phenyl)piperidin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-Hydroxy-3-phenylpiperidin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-Phenylpiperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(4-Fluorophenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(3-Fluorophenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(2-Fluorophenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(4-Chlorophenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(3-Chlorophenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(2-Chlorophenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-

one;

2-(3-(4-Bromophenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(3-Bromophenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(2-Bromophenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(4-Cyanophenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(3-Cyanophenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(2-Cyanophenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(4-Methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(3-Methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(2-Methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(2-Ethoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(6-Fluoro-2-methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(5-Fluoro-2-methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(4-Fluoro-2-methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

(*S*)-2-(3-(4-Fluoro-2-methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

(*R*)-2-(3-(4-Fluoro-2-methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(4-Chloro-2-methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(5-Bromo-2-methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-

pyrimidin-4-one;

2-(3-(2,6-Dichlorophenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(2,4-Dimethoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyridyl)-3*H*-pyrimidin-4-one;

2-(3-(3,4-Dimethoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(2,5-Dimethoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(2,6-Dimethoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(2,4-Difluoro-6-methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(1-Naphthyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(2-Naphthyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(2,3-Dihydrobenzofuran-7-yl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(Benzofuran-2-yl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(4-(Pyrrolidin-1-yl-methyl)phenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(4-(Pyrrolidin-1-yl)phenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(2-methoxy-4-(pyrrolidin-1-yl)phenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(2-methoxy-5-(pyrrolidin-1-yl)phenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(4-(Phenyl)phenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-

one;

2-(3-(4-(4-Fluorophenyl)phenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(4-(4-Methoxyphenyl)phenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(4-(2-Methoxyphenyl)phenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(4-(Morpholin-4-yl)phenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(4-(4-Methylpiperazin-1-yl)phenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(4-Fluoro-2-methoxyphenyl)-4-methylpiperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

(*S*)-2-(3-(4-Fluoro-2-methoxyphenyl)-4-methylpiperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

(*R*)-2-(3-(4-Fluoro-2-methoxyphenyl)-4-methylpiperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(4-Acetyl-3-(4-fluoro-2-methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(4-Benzyl-3-(4-fluoro-2-methoxyphenyl)piperazin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(4-(4-Fluorophenyl)piperidin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(4-Cyano-4-phenylpiperidin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(4-(6-Fluorobenofuran-3-yl)piperidin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

2-(3-(Benzoisoxazol-3-yl)piperidin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-pyrimidin-4-one;

(*S*)-2-(3-(Benzoisoxazol-3-yl)piperidin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-

pyrimidin-4-one;

(*R*)-2-(3-(Benzoisoxazol-3-yl)piperidin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-

pyrimidin-4-one;

2-(3-(6-Fluorobenzoisoxazol-3-yl)piperidin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-

pyrimidin-4-one;

2-(4-(6-Fluorobenzoisoxazol-3-yl)piperidin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-

pyrimidin-4-one;

2-(4-(5-Methylbenzofuran-3-yl)piperidin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-

pyrimidin-4-one; and

2-(4-(6-Fluorobenzothiophene-3-yl)piperidin-1-yl)-3-methyl-6-(4-pyrimidyl)-3*H*-

pyrimidin-4-one

or a salt thereof, or a solvate thereof or a hydrate thereof.

11. A medicament comprising as an active ingredient a substance selected from the group consisting of the pyrimidone derivative represented by formula (I) and a salt thereof, and a solvate thereof and a hydrate thereof according to claim 1.

12. A tau protein kinase 1 inhibitor selected from the group consisting of the pyrimidone derivative represented by formula (I) and a salt thereof, and a solvate thereof and a hydrate thereof according to claim 1.

13. The medicament according to claim 11 which is used for preventive and/or therapeutic treatment of a disease caused by tau protein kinase 1 hyperactivity.

14. The medicament according to claim 11 which is used for preventive and/or therapeutic treatment of a neurodegenerative disease.

15. The medicament according to claim 14, wherein the neurodegenerative disease is selected from the group consisting of Alzheimer disease, ischemic cerebrovascular accidents, Down syndrome, cerebral bleeding due to cerebral amyloid angiopathy, progressive supranuclear palsy, subacute sclerosing panencephalitic parkinsonism, postencephalitic parkinsonism, pugilistic

encephalitis, Guam parkinsonism-dementia complex, Lewy body disease, Pick's disease, corticobasal degeneration, frontotemporal dementia, vascular dementia, traumatic injuries, brain and spinal cord trauma, peripheral neuropathies, retinopathies, and glaucoma.

16. The medicament according to claim 11, wherein the disease is selected from the group consisting of non-insulin dependent diabetes, obesity, manic depressive illness, schizophrenia, alopecia, breast cancer, non-small cell lung carcinoma, thyroid cancer, T or B-cell leukemia, and a virus-induced tumor.